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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,986	07/16/2003	Steven A. Zettel	101AC-037A	8814

7590 03/28/2005

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EXAMINER

GREENE, JASON M

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,986

Applicant(s)

ZETTEL, STEVEN A.

Examiner

Jason M. Greene

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1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 041108 56-04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the filter of claim 1 wherein the spiral has a central in line 1. However, the claim is incomplete since it fails to recite what feature is located in the central portion of the spiral. It appears as though the claim was intended to recite the spiral having a central opening. Accordingly, for examination purposes, the Examiner has assumed that claim 4 was intended to recite such a feature. If this assumption is correct, the Examiner suggests Applicants amend the claim accordingly.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Schaaf et al. '683.

With regard to claim 1, Schaaf et al. '683 discloses a wire mesh filter comprising a knitted wire mesh (wire screening) having a longer dimension and a shorter dimension, folded along the longer dimension (see Figs. 5 and 6) so that the shorter dimension is effectively halved, and rolled into a spiral geometry in Figs. 5, 6, 19 and 20 and page 1 col. 1, line 54 to page 1, col. 2, line 54.

With regard to claim 4, Schaaf et al. '683 discloses the spiral having a central opening in Figs. 19 and 20.

5. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Fletcher et al.

With regard to claim 1, Fletcher et al. discloses a tubular structure that is usable as a wire mesh filter, the structure comprising a knitted wire mesh (the screen) having a longer dimension and a shorter dimension, folded along the longer dimension (see col. 2, lines 32-35) so that the shorter dimension is effectively halved, and rolled into a spiral geometry in Figs. 1 and 2 and col. 1, line 65 to col. 3, line 17.

With regard to claims 2 and 5, Fletcher et al. disclose the wire being comprised of a high temperature, electrically conductive stainless steel alloy in col. 2, lines 35-36.

With regard to claim 4, Fletcher et al. discloses the spiral having a central opening in Fig. 2.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schaaf et al. '683 in view of Ueda et al.

Schaaf et al. is silent as to the specific materials used to form the wire.

Ueda et al. teaches a spiral filter comprising a knitted wire mesh (215) wherein the wire is comprised of a high temperature stainless steel alloy that is electrically conductive in Figs. 1, 3 and 8 and col. 5, lines 36-47.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the metallic alloy of Ueda et al. into the wire mesh of

Schaaf et al. '683 to allow the wire mesh filter to be electrically regenerated, as suggested by Ueda et al. in col. 5, lines 15-22.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schaaf et al. '683 in view of Buck.

Schaaf et al. '683 does not disclose the spiral having no central opening.

Buck discloses a spiral wire mesh filter having no central opening in Fig. 9.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the no central opening of Buck into the filter of Schaaf et al. '683 to maximize the amount of filter material contained within a given volume, as suggested by Buck in Fig. 9 and as is well known in the art.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schaaf et al. '683 in view of Ueda et al.

Schaaf et al. '683 discloses a particle trap having a wire mesh filter, wherein the wire mesh filter comprises a knitted wire mesh (wire screening) having a longer dimension and a shorter dimension, folded along the longer dimension (see Figs. 5 and 6) so that the shorter dimension is effectively halved, and rolled into a spiral geometry in Figs. 5, 6, 19 and 20 and page 1 col. 1, line 54 to page 1, col. 2, line 54.

Schaaf et al. '683 does not disclose the particles trap being regenerated by resistive heating.

Ueda et al. teaches a regenerable spiral filter comprising a knitted wire mesh (215) wherein the wire is comprised of a high temperature stainless steel alloy that is regenerated by resistive heating in Figs. 1, 3 and 8 and col. 5, lines 15-47.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the metallic alloy resistive heating regeneration of Ueda et al. into the wire mesh of Schaaf et al. '683 to allow the wire mesh filter to be electrically regenerated, as suggested by Ueda et al. in col. 5, lines 15-22.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Schaaf et al. '886 and Fasanaro et al. references disclose similar filters.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason M. Greene
Examiner
Art Unit 1724


3/21/05

jmg
March 21, 2005